

Practitioners' Contact Lens Preference

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The uniqueness and individuality of optometric practitioners is amazing. Practitioners opinions vary in all areas from the method of determining a spectacle prescription to setting up a treatment plan for an ocular disease. These individual approaches are why optometry is often considered more an art than a science. This survey was designed to show practitioners' preferences in the area of contact lenses. The information received was intended to broaden the understanding of contact lenses beyond the academic setting by learning the trends practitioners today are following.

The areas involved ranged from favorite hydrogel and rigid gas permeable (RGP) lenses to preferred presbyopic contact lens correction and preferred disinfection systems. A copy of the survey appears in figure 1.

Methods

The survey was distributed to one hundred randomly chosen Michigan optometrists. An explanatory cover letter was included providing the purpose for the study and directions to complete the questionnaire. The questions were to be answered using experinces, observations, and opinions.

In questions one through five the participants were requested to list their top three lens brands in regards to fit, durability, deposit resistance, and consistency of rotation in toric lenses. Question six entailed identifying their most often prescribed methods of presbyopic contact lens correction. While seven through nine involved providing percentages to determine

the most commonly prescribed wearing schedules and the role of contact lenses in their practice. The last question concerned listing the care system of choice for rigid lenses and a system for hydrogel lenses.

Results

The survey achieved a 21% response rate. Many of the questionnaires were returned with unanswered questions. The practitioners that responded ranged evenly between minimal contact lens fitting and predominately contact lens practices. The responses from the questions are listed in the Tables provided.

The Durasoft 2 lens was chosen as the most often fit and most durable hydrogel spherical daily wear lens, with Cibasoft a close second for the most often fit lens. The number one choice in deposit resistance for hydrogel lenses was the CSI lens, keeping in mind that patient tear chemistry, disinfection methods, and environment play major roles in deposit formation.

The most popular RGP lens was the Boston IV lens. No particular RGP lens stood out in deposit resistance, although Boston IV and Polycon II were chosen more often than other brands, the statistical significance was lacking.

The top toric hydrogel lens was the Optima Toric with the Durasoft Optifit toric listed as the lens with the least or most consistent rotation. The Acuvue lens was shown as the disposable lens of choice although practitioners from this study generally fit less than 15% of their patients with this type of lens. Hydrogel lenses were chosen 100% over RGP lenses for

extended wear, with Equalens the number one RGP listed and Durasoft 3 the favored hydrogel. All practitioners reported more use overall of hydrogel lenses than RGP.

The preferred contact lens correction for presbyopes was monovision at 66.6%, the second choice being distance contact lenses with a reading prescription at 27.8%. The favored wearing schedule was shown to be daily wear with flexible wear and lastly extended wear far behind, being fit in only 10% of the cases. For hydrogel lenses the hydrogen peroxide disinfection systems appeared most popular with A. O. Sept listed as the number one brand. The most popular chemical system listed was Optifree. Overwhelmingly, the Bosten system by Polymer Technology was preferred for RGP lenses.

Conclusions

The survey results show that rarely is one particular lens brand an obvious number one to all practitioners. Considering there are over one hundred hydrogel spherical lenses on the market it is surprising to find any preferences. A trend toward Wesley-Jessen as the preferred hydrogel manufacturer and Polymer Technology as the RGP producer was noted. The results enlighten the optometric student as to the number of different lenses used in the practice setting and encourage the new practitioner to attempt fittings with brands from other than the major manufacturers used predominately in their earlier training.

An expected result was the preference of hydrogel lenses over RGP lenses with daily wear the wearing schedule of choice. Disposable lenses and extended wear schedules appear to be on the

rise, but of the optometrists surveyed their use is minimal, generally prescribed in less than 25% of their patients. A report from the Contact Lens Forum in January 1990 stated disposable contact lenses making modest strides since their introduction, specialty lens fitting on the rise, and increase in part time lens wear, and stagnation in the RGP market. Although the survey of Michigan Optometrists supports the Forum's observation regarding RGPs, an article by Maruna, Yoder, and Andrasko (1989) stated an increase in RGP use compared to hydrogel use over the past two years and predicted an acceleration in RGP use during the next few years. Though these results by Maruna et. al. were found, it appears that more research is required in this area since other surveys still show the RGP lagging. It is the opinion of this surveyor that until patients are willing to pay the higher fees associated with rigid lenses and practitioners take interest in accepting the fitting challenges of RGPs, the hydrogel will continue to advance in the market leaving the RGP behind.

The results of a survey by Weissman, Remba, and Fugedy (1987) found many practitioners employing the extended wear design, but compromising by decreasing the number of days of wear before removal and disinfection, 70% suggesting weekly removal. Though presently all extended wear lenses are to be disinfected weekly, it is difficult to determine the compliance level by practitioners and patients. The survey of Michigan optometrists found 70% of practitioners using flexible wear in less than 10% of their patients. Considering it is a proven fact that extended

wear schedules are more of a threat to healthy lens wear, causing more complications than daily wear, it is expected that flexible wearing schedules will be on the rise. Many patients do not wish to give up their extended wear advantages, but simply decreasing the number of overnight wearings or suggesting lenses be worn only occasionally overnight can help prevent some of the problems experienced with long term extended wear.

In regards to specialty lenses this survey touched only on presbyopic correction which showed monovision as the top fitting choice with only one practitioner choosing bifocal contact lenses as their favorite fitting method. Most practitioners are willing to try bifocal contact lenses, but generally find monovision to be more successful. The surprise in this survey was the favoritism shown the hydrogen peroxide systems in disinfection. The chemical method was chosen by only 37.6% of the practitioners compared to 63.2% for the hydrogen peroxide system, contradicting the survey by Schwartz (1989) which showed a trend away from hydrogen peroxide due to the ease of use of the chemical method. Schwartz's survey showed chemical disinfection being preferred by 41.5% and hydrogen peroxide by 37.8%. As expected, the Boston system for RGPs was the predominant choice by 83.3%.

Though this survey was informative it would be interesting to know practitioner's reasoning behind their lens choices. This survey leaves room for more in-depth research into practitioner's rationale in lens choice and wearing schedules. In further studies a smaller topic base is suggested. The questions should

involve either short answers or rating the possible reasons for fitting a lens on a scale of one to five. A possible method in result determination could involve providing values to responses such that a lens listed first would receive 3 points, second two points, and third one point. This would allow a measure involving the importance of lens choice position. Another important area which this survey overlooked was determining the practice mode which can provide some idea of the amount and type of contact lens fitting the practitioner is involved with. The last suggestion is in regards to the mailing list used. A more accurate and up-to-date listing of practitioners could be found in telephone directories paying attention to involve all regions of Michigan.

References

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Figure 1.

Practitioner's Contact Lens Preference Survey

Ex. Soft spherical daily wear lenses you fit most often:
1 Cibasoft, 2 B&L Optima, 3 Hydrocurve

1. Soft spherical daily wear lenses you fit most often:
 1. 2. 3.
 - a. Soft lenses which you find are most durable:
 1. 2. 3.
 - b. Soft lenses which by your observation resist build up and deposits the best:
 1. 2. 3.
2. List your top daily wear rigid materials:
 1. 2. 3.
 - a. RGP lenses which by your observation resist build up and deposits the best:
 1. 2. 3.
3. Soft toric lenses you fit most often:
 1. 2. 3.
 - a. Soft toric lenses which you feel have the least or most consistent rotation:
 1. 2. 3.
4. Disposable lenses you fit most often:
 1. 2. 3.
5. Circle your extended wear lens of choice: RGP or Hydrogel
 - a. List your RGP extended wear materials:
 1. 2. 3.
 - b. List your extended wear hydrogel brands:
 1. 2. 3.
6. Circle your most often prescribed contact lens correction for presbyopes:

Distance CL's with reading Rx
monovision
Bifocal CL's (both RGP & hydrogel)
7. Of the wearing schedules listed, what percentage of each do you fit in practice?
 - a. Daily wear
 - b. Extended wear
 - c. Flexible wear
8. What percent of your practice is based on soft CL fitting?
 - a. of those soft lenses what percent are disposable?
 - b. Do you prefer to fit disposables on a daily wear or extended wear schedule?
9. What percent of your practice is based on RGP fitting?
10. What is your care system of choice for
 - a. hydrogel lenses?
 - b. RGP lenses?

Table 1.

Soft spherical daily wear lenses chosen in top three

Durasoft 2	10	Total Responses	47	
Cibasoft	9	Manufacturer's Represented		
Zero-6	5	Wesley-Jessen	13/47	27.7%
Zero-4	4	Ciba Vision Corp.	11/47	23.4%
Optima 38	4	Allergan Optical	9/47	19.1%
Aquaflex	3	Bausch + Lomb	5/47	10.6%
Edge II	3	Ocular Sciences	5/47	10.6%
Ciba Std.	2	Sola/Barnes-Hind	4/47	8.5%
CSI	2			
CQ-4	2			
Sofspin	1			

*the number correlates to the number of times the lens appeared in the top three.

Table 2.

Most durable soft lenses

Durasoft 2	11	Total Responses	37	
Zero-6	5	Manufacturer's Represented		
Aquaflex	3	Wesley-Jessen	14/37	37.8%
Cibasoft	3	Allergan Optical	7/37	18.9%
Edge II	3	Sola/Barnes-Hind	5/37	13.5%
Hydrocurve II	3	Bausch + Lomb	4/37	10.8%
Optima 38	3	Ciba Vision Corp.	3/37	8.1%
B + L B3	1	Ocular Sciences	3/37	8.1%
CSI	1	Coast Vision	1/37	2.7%
Hydrasoft	1			
Mini-Lens	1			
Soft Mate B	1			
Zero-4				

Table 3.

Soft Lenses which resist deposits best

CSI	7	Total Responses	30	
Durasoft 2	5	Manufacturers Represented		
Aquaflex	3	Sola/Barnes-Hind	9/30	30.0%
Zero-6	3	Wesley-Jessen	8/30	26.7%
Cibasoft	2	Allergan Optical	5/30	16.7%
Zero-4	2	Ciba Vision Corp.	2/30	6.7%
Acuvue	1	Coopervision	1/30	3.3%
CV Classic	1	Bausch + Lomb	1/30	3.3%
Edge II	1	Coast Vision	1/30	3.3%
Hydrasoft	1	Ocular Sciences	1/30	3.3%
Hydrocurve II	1	Vistakon	1/30	3.3%
Optima 38	1			
Permaflex Thin	1			
Soft Mate B	1			

Table 4.

Rigid Gas Permeable daily wear listed in top three

Boston IV	6	Total Responses	33	
Boston II	5	Manufacturers Represented		
Equalens	5	Polymer Technology	18/33	54.5%
Flouroperm 30	4	Paragon Optical	10/33	30.3%
Paraperm 02	4	Sola/Barnes-Hind	3/33	9.1%
Polycon II	3	Permeable Contact	2/33	6.1%
Boston RxD	2			
Optacryl 60	2			
SGP	2			

Table 5.

RGP lenses which resist deposits best

Boston IV	4	Total Responses	24	
Polycon II	4	Manufacturers Represented		
Equalens	3	Polymer Technology	10/24	41.7%
Flouroperm 30	3	Paragon Optical	8/24	33.3%
Paraperm 02	3	Sola/Barnes-Hind	4/24	16.7%
Boston RxD	2	GT Labs	1/24	4.2%
Optacryl 60	2	Permeable Contact	1/24	4.2%
Boston II	1			
Flurex 700	1			
SGP	1			

Table 6.

Hydrogel Torics Listed in top three

Optima	11	Total Responses	47	
Torisoft	10	Manufacturers Represented		
Durasoft Optifit	9	Wesley-Jessen	13/47	27.7%
Hydrocurve II	5	Bausch + Lomb	11/47	23.4%
Durasoft 3 Toric	4	Ciba Vision Corp.	11/47	23.3%
Hydrocon	2	Sola/Barnes-Hind	5/47	10.6%
Hydrasoft	1	Kontur	2/47	4.3%
Hydromarc	1	Vistakon	2/47	4.3%
Hydron Ultra T	1	Allergan Optical	1/47	2.1%
Spectrum	1	Coast Vision	1/47	2.1%
Sunsoft	1			
Vistamarc	1			

Table 7.

Toric Hydrogels with the least or most consistent rotation

Durasoft Optifit	8	Total Responses	36	
Optima	8	Manufacturers Represented		
Torisoft	5	Wesley-Jessen	10/36	27.8%
Hydrocurve II	4	Bausch + Lomb	8/36	22.2%
Durasoft II	2	Ciba Vision Corp.	6/36	16.7%
Hydrasoft	2	Sola/Barnes-Hind	4/36	11.1%
Hydrocon	1	Coast Vision	2/36	5.6%
Hydromarc	1	Vistakon	2/36	5.6%
Hydron Ultra T	1	Allergan Optical	1/36	2.8%
Spectrum	1	Kontur	1/36	2.8%
Sunsoft	1			
Vistamarc	1			

Table 8.

Disposables fit most often

Acuvue	13/20	65%
New Vues	4/20	20%
Seequence	3/20	15%

Table 9.

Preferred contact lens correction for presbyopes

Monovision	12/18	66.6%
Distance CL's	5/18	27.8%
with Reading Rx		
Bifocal CL's	1/18	5.6%

Table 10.

Rigid gas permeable extended wear materials in top three

Equalens	8	Total Responses	14	
Fluoroperm 92	3	Manufacturers Represented		
Paraperm EW	2	Polymer Technology	8/14	57.1%
Flurex 700	1	Paragon Optical	5/14	35.7%
		GT Labs	1/14	7.1%

Table 11.

Hydrogel extended wear brands in top three

Durasoft 3	9	Total Responses	35	
Acuvue	6	Manufacturers Represented		
Zero-4	6	Wesley-Jessen	9/35	25.7%
Optima EW	4	Allergan Optical	6/35	17.1%
Hydrocurve	3	Vistakon	6/35	17.1%
Permaflex Thin	3	Sola/Barnes-Hind	4/35	11.4%
Softcon EW	2	Coopervision	3/35	8.6%
CSI T	1	Ciba Vision Corp.	2/35	5.7%
Versaflex	1	Ocular Science	1/35	2.9%

Table 12.

Disinfection Systems of choice

Hydrogel			RGP		
Chemical	6/19	31.6%	Boston	15/18	83.3%
Hydrogen Peroxide	12/19	63.2%	Allergan	3/18	16.7%
Heat	1/19	5.3%			

Table 13.

Wearing Schedules Prescribed

Daily prescribed in	30-60% of Patients by	22.2% of practitioners
	70-80%	44.4%
	85-100%	33.3%
Extended Wear	5-10%	52.9%
	15-25%	47.1%
Flexible Wear	1-10%	69.2%
	20-25%	30.7%

Hydrogel DW fit most often

CO4	3/1	3.0
Edge II	11/4	2.0
Zero-4	8/3	2.7
Ciba Std.	5/2	2.5
Aquaflex	5/2	2.5
Zero-6	17/7	2.4
Cibasoft	18/9	2.0
CSI	4/2	2.0
Optima	8/4	2.0
Soft Spin	2/1	2.0
Durasoft 2	18/10	1.8
Hydrocurve	2/2	1.0

Hydrogel DW which resist buildups and deposits best

Zero-4	3/1	3.0
CV Classic	3/1	3.0
CSI	20/7	2.9
Aquaflex	5/2	2.5
Zero-6	9/4	2.3
Durasoft 2	11/5	2.2
Optima	4/2	2.0
Hydrocurve	4/2	2.0
Permafex Thin	2/1	2.0
Edge II	2/1	2.0
Acuvue	2/1	2.0
Cibasoft	3/2	1.5
Hydrasoft	1/1	1.0